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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,076	08/20/2004	William E. Bernier	FIS920040098US1	5075
29154	7590	09/15/2005	EXAMINER	
FREDERICK W. GIBB, III GIBB INTELLECTUAL PROPERTY LAW FIRM, LLC 2568-A RIVA ROAD SUITE 304 ANNAPOLIS, MD 21401			FARAHANI, DANA	
			ART UNIT	PAPER NUMBER
			2891	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/711,076

Applicant(s)

BERNIER ET AL.

Examiner

Dana Farahani

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/20/04 and 8/26/04</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of claims 1-14 in the reply filed on 7/13/05 is acknowledged.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson et al., hereinafter Peterson (US Patent 6,921,860) in view of Raiser et al., hereinafter Raiser (US Patent 6,700,209).

Regarding claim 1, Peterson discloses in figure 2, a device 20, solder connectors 50 connected to the device; a compressible film, located in dams 30 (see col. 6, lines 14-20), surrounding sides of the solder connectors; and an insulating material 40 filling gaps on top of device 20.

Peterson does not disclose a carrier is connected to the device, such that material 40 is between the carrier and the device.

Raiser disclose in figure 1, a device 12 is connected to the carrier 14 underneath the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to mount the device of Peterson on a carrier, or a substrate, since electronic chips are

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commonly conveniently packaged by mounting them onto carriers, or substrates so they can be used in desired applications.

Regarding claims 2, 3, 8, 9, and 10, Peterson in view of Raiser renders obvious the limitations in the claims, as discussed above, except for expressly disclosing the compressible film is stable above the melting point of the solder connection, and the connectors are lead free. Peterson, however, discloses that the compressible film and the connectors can be chosen from a variety of materials (see col. 6, lines 14-19; See also col. 8, lines 19-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to choose an appropriate material to be used to make the film and the connectors in accordance with the availability of the material in the chip manufacturing environment and the particular method which one of ordinary skill in the art wishes to make the structure. See *In re Leshin*, 125 USPQ 416, for the proposition that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Regarding claims 4 and 11, the compressible film 30 forms a pattern on the device 20.

Regarding claims 5 and 12, the pattern has channels (in between films 30) that are filled with the insulating material 40.

Regarding claims 6 and 13, the sides of the cylindrical dams 30 comprise diagonal stripes when the structure is viewed from an angle other than the horizontal angle, and a perspective other than the normal perspective.

Regarding claims 7 and 14, the dams 30 are rectangular.


*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (571)272-1706. The examiner can normally be reached on M-F 9:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can be reached on (571)272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Farahani

  
HOAI PHAM  
PRIMARY EXAMINER